

Date: Tue, 21 Sep 93 04:30:22 PDT
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V93 #54
To: Ham-Ant

Ham-Ant Digest Tue, 21 Sep 93 Volume 93 : Issue 54

Today's Topics:

 hamstick antenna (3 msgs)
 helpful weatherproofing trick
 Kill the Rubber Duck! (3 msgs)
 Parallel Dipole comments and questions
 VHF antenna
 When phones transmit (Was Health Risks) (2 msgs)

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Sun, 19 Sep 1993 17:18:26 GMT
From: usc!howland.reston.ans.net!spool.mu.edu!nigel.msen.com!ilium!rcsuna.gmr.com!
kocrsv01!c2xjcb@network.ucsd.edu
Subject: hamstick antenna
To: ham-ant@ucsd.edu

> flexible. They are easy to mount and tune. I love the little things.
> I have lots of QSO's with them. I have other mobile antennas, like the
> Webster bandspanner and the bugcatcher, and they probably send a little
> more RF out into the air instead of heat, but the hamstick is just so
> darned convenient and it works well enough for me!
>
> I like the cheap and workable aspect. If you check the stats on the popular
> expensive mobile HF antennas, the most expensive (the outbacker) turns out
> to have very low field strength in tests compared to even the much maligned
> Hustler. They all "work" though. Pick up a hamstick. Find out if you need
> more. Only \$17 used up, and you can always use it in a pinch.

>

I've also used a "hamstick"; the one I bought (\$17) was approx 3ft of (bamboo?) hollow tubing with a helically wound coil, and approx 3ft of 1/8" stainless steel "whip" on the top. It was designed for 20M, and worked well. I bought some 1/8" steel rod at the hardware store (about \$1.20 for 3') and found that a 2" "whip" worked well on 10M and a 4.5" (?) worked well on 12M, 9" worked well on 15M, and 18" worked well on 17M. Thus, for about \$18 I had a "manually switched 5-band" mobile antenna.

I'd use it as a "portable" antenna, as a mag-mount on the trunk isn't sufficient to hold it in place (I have a 6" magnet, and it still came loose!). I ended-up homebrewing a 3-band manually switched base loaded antenna which works well. The base coil is wound on 9" of 1.5" PVC pipe, with about 18 turns of 16ga "zip cord"; this gets a 3.5' whip resonant on 20M. I've tapped the coil for 10M and 15M, and select the band with a jumper wire w/spade lug. Works great.

--

James C. Bach	Ph: (317)-451-0455	The views & opinions expressed
Advanced Project Engr.	GM-NET: 8-322-0455	herein are mine alone, and are
Powertrain Strategy Grp	Amateur Radio: WY9F	NOT endorsed, sponsored, nor
Delco Electronics Corp.	Just say NO to UNIX!	encouraged by DE or GM.

Date: Mon, 20 Sep 1993 21:00:55 GMT
From: library.ucla.edu!europa.eng.gtefsd.com!howland.reston.ans.net!torn!nott!
cunews!freenet.carleton.ca!Freenet.carleton.ca!ai190@network.ucsd.edu
Subject: hamstick antenna
To: ham-ant@ucsd.edu

I use a hamstick 80m on my truck...along with a yaesu ft 747...
Been getting 5/9 reports from Newfoundland to Manitoba from my
driveway in Ottawa Ontario. In my opinion its a great mobile
monoband antenna.

73

--

Bob Sharp VE3YBC PO BOX 41052 OTTAWA ONTARIO CANADA K1G5K9
**Internet:ve3ybc@bbs.ve3jf.ampr.org bob@pinetree.org **
**freenet ai190: Disclaimer:The opinions stated are mine and **
**my employers. I own the flipping company. Cheers..... **

Date: Mon, 20 Sep 1993 20:37:06 GMT
From: netcomsv!attain!icd.teradyne.com!news@decwrl.dec.com
Subject: hamstick antenna

To: ham-ant@ucsd.edu

In article <27aetr\$de3@samba.oit.unc.edu> Ian.Cassell@launchpad.unc.edu (IAN CASSELL) writes:

>I am thinking of going HF mobile again and I have heard tell of a
>lightweight mobile antenna called the hamstick. Does anyone know anything
>about it? Who makes it, is it any good, etc.

I think they are made by Radio Ware - check QST or 73 for their ads. Nice antennas. There are separate antennas for each band. Each is about 8' long, with a 4' fiberglass-covered helical section, about 1/2 inch in diameter and an adjustable 4' stainless-steel whip. The base is a standard 3/8 inch stud. I haven't used mine mobile, but I use it as my home HF antenna. I live in an apartment building with one of those infamous 'no antennas' clauses, so I made a bracket out of a bar clamp, some aluminum, and a 3/8 to SO-239 adapter that I clamp to my windowsill. The antenna hangs horizontally, with the metal window frame acting as a ground. 100 watts gets my believable 59's on 20M from Eastern Europe, without bothering the TV 3 feet away.

/mike

--

\\| Michael L. Ardai N1IST Teradyne ATG Boston

/|\ ardai@maven.dnet.teradyne.com

Date: 20 Sep 1993 21:12 CDT

From: dog.ee.lbl.gov!agate!howland.reston.ans.net!usc!elroy.jpl.nasa.gov!swrinde!dptspd!TAMUTS.TAMU.EDU!zeus.tamu.edu!tskloss@network.ucsd.edu

Subject: helpful weatherproofing trick

To: ham-ant@ucsd.edu

I have been building antennas for home and auto use and the best stuff I have found for waterproofing is that thick "plasticoat" goop you can get at a hardware store. It is a liquid rubber compound that dries into a flexible sheath that adheres to components like paint. Once your tuning elements are set, either dip them in the can of goop, paint in on, or make a mold to cast it in. Thinning the plasticoat helps for brushing or for thinner coats. The raw goop makes a 1/16" thick coat when simply dipped.

I don't know what will happen in the long run. Since it is oil-based it probably won't hold up to gasoline, and it may start to crack after a few years in the sun. But for a quick seamless fix, it dries to a usable degree in a few hours and fully overnight. Flexability is good for auto use if your antenna will whip noticeably.

Write me if you have had similar experiences whether good or bad. I would

like some long-term info as well.

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/-----\
|* *( * ( ** ) ( * * ) * * ) * |           Tim Skloss
|* * \ / \ / * * | Texas A&M University, Dept. of Chemistry
|* /===== \ * | College Station, TX 77843-3255
|* | OXFORD | | LABORATORY FOR MAGNETIC RESONANCE AND
| | mags. | * | MOLECULAR SCIENCE
|* | RULE! | | voice: (409) 845-4459
| |-----| | fax: (409) 845-4719
| || || | Internet: TSKLOSS@venus.tamu.edu
| == == | My opinions do not reflect those of TAMU!
\-----/

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"The brain is much like a computer;
there are really no dumb people, just people running DOS!"
PowerPC - The ULTIMATE personal computing machine.

Date: Mon, 20 Sep 1993 19:38:17 GMT
From: dog.ee.lbl.gov!agate!spool.mu.edu!uwm.edu!linac!att!cbnews!
hellman@network.ucsd.edu
Subject: Kill the Rubber Duck!
To: ham-ant@ucsd.edu

In article <1993Sep16.230845.1@wcsup.ctstateu.edu>,
ritterbus001@wcsup.ctstateu.edu writes:
> And now, for hopefully my last stupid newbie question.
>
> I have a RS HTX202, and several people have suggested that I get rid
> of the rubber duck, and get a "real" antenna. One suggested (jokingly,
> I think) that even a piece of coat hanger would be better, which brings
> me to my questions:
>
> 1) Would any telescoping antenna, extended to feet = 468 / 144 Mhz be an
> end-fed halfwave, and work correctly without further ado?
>
> 2) Would the same antenna, shortened to feet = 234 / 144 Mhz work as
> a quarterwave? Is a groundplane required? What is a good idea
> for a groundplane for 2m?
>
> Or am I fooling myself, and should I just go buy an antenna designed
> for 2m work (but it's so much more satisfying to roll my own :-)
>
> Thanks in advance for any replies,
>
>

Of course a tower mounted antenna is much better than the thing supplied with an HT but I found that the HTX 202 rubber ant works reasonably well. I compared mine with a 5/8 whip (coil in base) and a wire wound replacement antenna. I found that rcv'd signals from a repeater and signal reports from the s meter at the repeater were best with the HTX 202 rubber ant. This was not the case with my ICOM HT where the 5/8 mini whip was best and the supplied rubber attenuator was the worst. I tried to place the HT in the same spot and repeated the test several times from different places. So in the car or in the shack I use real antennas but for HT operation I use the one supplied.

Shel WA2UBK dara@physics.att.com

Date: Mon, 20 Sep 1993 11:15:12 GMT
From: swrinde!cs.utexas.edu!math.ohio-state.edu!howland.reston.ans.net!
europa.eng.gtefsd.com!library.ucla.edu!news.mic.ucla.edu!unixg.ubc.ca!
unixg.ubc.ca!nntp.cs.ubc.ca!utcsri!utnut!nott!
Subject: Kill the Rubber Duck!
To: ham-ant@ucsd.edu

In article <1993Sep16.230845.1@wsub.ctstateu.edu>
ritterbus001@wsub.ctstateu.edu writes:

>2) Would the same antenna, shortened to feet = $234 / 144$ Mhz work as
> a quarterwave? Is a groundplane required? What is a good idea
> for a groundplane for 2m?
>

Mine does. I extend it to roughly 20" and it works fine.

Date: 21 Sep 1993 01:56:44 GMT
From: swrinde!cs.utexas.edu!math.ohio-state.edu!darwin.sura.net!news-
feed-2.peachnet.edu!concert!quad.wfunet.wfu.edu!matthews@network.ucsd.edu
Subject: Kill the Rubber Duck!
To: ham-ant@ucsd.edu

ritterbus001@wsub.ctstateu.edu wrote:
: And now, for hopefully my last stupid newbie question.

: I have a RS HTX202, and several people have suggested that I get rid
: of the rubber duck, and get a "real" antenna. One suggested (jokingly,
: I think) that even a piece of coat hangar would be better, which brings
: me to my questions:

: 1) Would any telescoping antenna, extended to feet = $468 / 144$ Mhz be an

>80,40,20,15 and 10 meters. . .

>Now the question. I'm down to trimming or adding to the wires. My
>analyzer shows that the 80 meter wire needs to be shortened, and all of
>the other wires lengthened. This is a bit of a surprise, since I
>initially cut all of the wires long. I assume I'm seeing some
>interaction between the wires so the question is, in what order should
>I begin to tune this antenna? I'm leaning towards starting from 80 and
>working up in freq. since I assume the longer wire has the most influence.

There's a lot of interaction between the wires of a parallel dipole antenna. In general, the longer wires will have a much greater effect on the shorter ones than vice-versa, so begin tuning with the lowest frequency dipole. The antenna will have a narrower bandwidth than individual dipoles. You may find tuning also to be very sensitive to wire spacing, so make sure you use plenty of spacers. I've found adjustment of even a two-band version to be pretty tedious. Good luck!

Roy Lewallen, W7EL
royle@tekig6.pen.tek.com

Date: 20 Sep 1993 11:02:01 GMT
From: usc!howland.reston.ans.net!vixen.cso.uiuc.edu!ux1.cso.uiuc.edu!
dobrowol@network.ucsd.edu
Subject: VHF antenna
To: ham-ant@ucsd.edu

timb@vpnet.chi.il.us (Tim Bieschke) writes:

>I'm looking for a good antenna for VHF High (154.1900 & 154.8450). I
>wouldn't mind a full wavelength one, I'm just not sure to go about making
>one. I can go with one antenna, for both freqs, right? I'm most
>interested in what to make the antenna out of, and how to attach the coax.
>The length of it is just $936/\text{freq}$ (for full wavelength), right? Thank you
>very much for your help, and happy monitoring!

Well, I use a very simple and inexpensive homemade dipole. Here is a
"parts list":

1/2" pvc pipe
1/2"x1/2"x1/2" pvc tee
coax cable
copper wire
2 wire connector crimp-together type things (don't know what they're called)

Cut the copper wires to the correct length (1/4 wave plus a 1/4 wave for a

half wave dipole, etc.)

Put the crimp-together connector thingy on one end of each copper wire segment and crimp.

Strip the coax. Feed through the tee.

Connect center conductor to one copper segment and crimp.

Connect coax braid to other copper segment and crimp.

Cut pvc pipe to appropriate length and slip a piece over each segment of the dipole. Connect another pvc segment to the bottom of the tee (use this segment to mount antenna)

You might also wanna cap the ends to prevent "the elements" from having their way with your antenna.

I would suggest cutting it a little longer than the 'ideal' and then adjusting for best SWR.

Note: If you don't wanna crimp and use copper wire, just strip an appropriate length of coax braid and an equal length of center conductor. Works just as well.

Like I said, this is what I am using...I have gotten nothing but good reports with it. Sitting above my second story window, I can hit repeaters over 30 miles away with my HT at low power.

--

LunarWolf KB9IQX
splen@uiuc.edu

...somos agresivos,
no violentos...

Date: Sun, 19 Sep 1993 17:06:11 GMT

From: usc!howland.reston.ans.net!spool.mu.edu!nigel.msen.com!ilium!rcsuna.gmr.com!
kocrsv01!c2xjcb@network.ucsd.edu

Subject: When phones transmit (Was Health Risks)

To: ham-ant@ucsd.edu

> Once a call is established, in most urban environments where cells
> are close together, the mobile is told to power down to help limit
> interference (also extended battery life for portables ;)).
> In reality in most cities your phone is transmitting well below
> its maximum power out.

>

> Any other questions?

>

Would you still feel "safe" having the antenna <6" from YOUR head?

--

James C. Bach

Ph: (317)-451-0455

The views & opinions expressed

Advanced Project Engr. GM-NET: 8-322-0455 herein are mine alone, and are
Powertrain Strategy Grp Amateur Radio: WY9F NOT endorsed, sponsored, nor
Delco Electronics Corp. Just say NO to UNIX! encouraged by DE or GM.

Date: 20 Sep 1993 14:13:12 -0500
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!pipex!
bnr.co.uk!corpgate!crchh327.bnr.ca!barnett@network.ucsd.edu
Subject: When phones transmit (Was Health Risks)
To: ham-ant@ucsd.edu

In article <1993Sep19.170611.25503@koccrsv01.delcoelect.com>,
c2xjcb@koccrsv01.delcoelect.com (James Bach) writes:

|>
|> > Once a call is established, in most urban environments where cells
|> > are close together, the mobile is told to power down to help limit
|> > interference (also extended battery life for portables ;)).
|> > In reality in most cities your phone is transmitting well be> low
|> > its maximum power out.
|> >
|> > Any other questions?
|> >
|>
|> Would you still feel "safe" having the antenna <6" from YOUR head?
|> --

Hey, it's not all that bad! What do you think the field strength is from some
ham-bench PA somewhere around noggin' height? Sitting in front of a monitor
has some potency as well. Each has their own spectra, but the EM energy from
each is all on about the same order of magnitude between the ears.

Most portable phones are Class 2 which means that the RF power output is
3 watts - 4(db/power step)* 2 (class number) = ~ a half watt. That is at full
power. Studies have shown that the average power level a portable phone operates
at is power level 4 (3w-4db*4= ~75 milliwatts). The lowest most phones can go
is around 3 mW, with some new varieties down under 1mW. This puts them down
farther than any walkie-talkie I know of.

The thing to keep in mind (or out...) is the field strength of the RF that
enters the brain. It would also be nice if we knew what differing effects
different frequencies had. To date, no 'resonances' have been noted,
(including the recent 800-900 MHz studies) so that doesn't come into play
with any significance.

Besides, if all the 'safety' we had to worry about was some RF on the brain,
the world would be a better place.

Bobby Barnett		All opinions here are mine,
Bell Northern Research		NOT BNR's...
Cellular Development Team		
barnett@bnr.ca		...and you can't have them!
KA4VBF		

End of Ham-Ant Digest V93 #54
